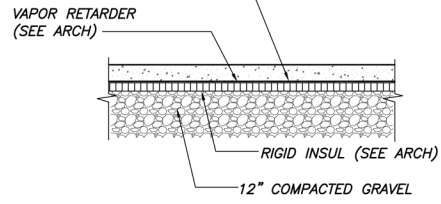
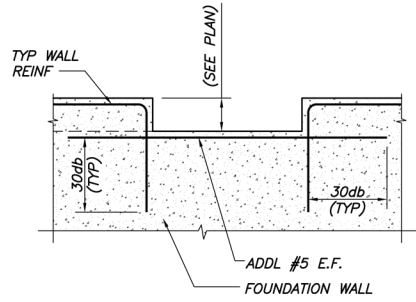


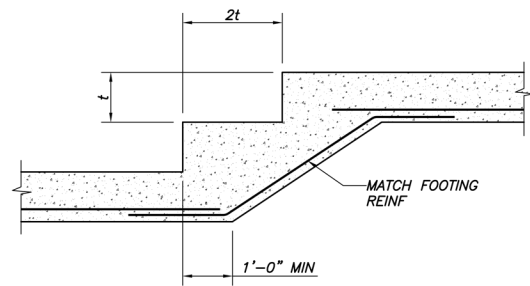
CONC SLAB ON GRADE. ALL SLABS ON GRADE ARE TO BE WET CURED PER ACI 308, LATEST EDITION



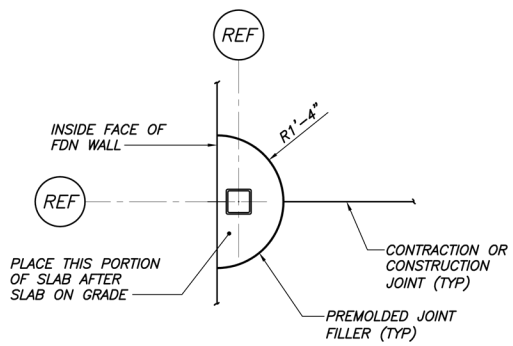
TYP SLAB DETAIL
N.T.S.



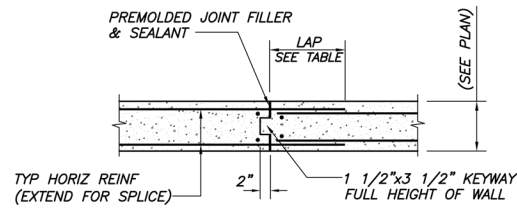
TYP STEP IN FDN WALL
N.T.S.



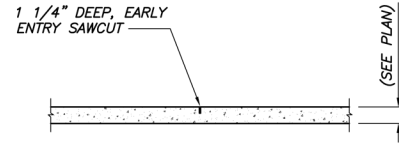
TYP STEP FOOTING DETAIL
N.T.S. t = FOOTING THICKNESS



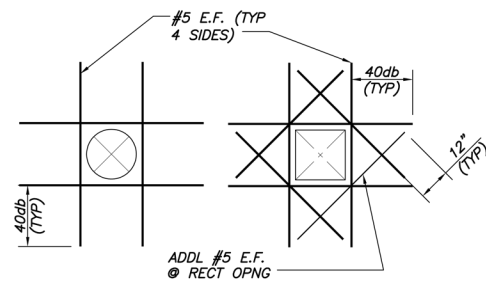
ALT EXT COLUMN ISOLATION JOINT DETAIL
N.T.S.



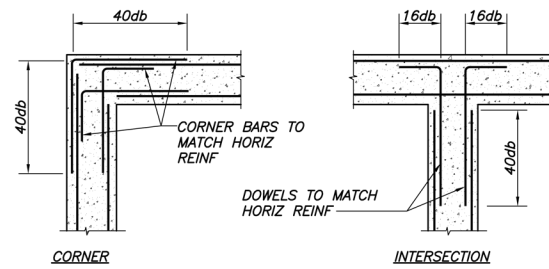
TYP CONSTRUCTION JOINT IN WALL
N.T.S.



TYP SLAB ON GRADE CONTRACTION JOINT DETAIL
N.T.S.



TYP OPENING IN WALL OR SLAB DETAIL
N.T.S.



TYP WALL REINF DETAILS
N.T.S.

REBAR LAP SPLICE TABLE	
BAR SIZE	LAP LENGTH
	3,000 PSI CONC
#4	24"
#5	28"

FOUNDATION NOTES

- FOUNDATIONS TO BEAR ON COMPETENT NATIVE SOILS OR SOLID ROCK LEDGE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SITE CONDITIONS AND TO BRING DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO SETTING FORMWORK.
- PRESUMPTIVE BEARING CAPACITY = 3,000 PSF.
- BOTTOM OF EXTERIOR FOOTINGS ON SOIL MUST BE AT LEAST 4'-6" BELOW FINISHED EXTERIOR GRADE FOR PROTECTION AGAINST FROST.
- REMOVE SOIL, DEBRIS, CLAY, ORGANIC MATERIAL FOR FOOTING BEARING.
- COMPACTED STRUCTURAL FILL SHALL BE USED TO BACKFILL FOR SUBGRADE BENEATH SLABS ON GRADE. STRUCTURAL FILL SHALL BE A CLEAN SAND-GRAVEL MIXTURE MEETING THE FOLLOWING GRADATION:

SCREEN OR SIEVE SIZE	PERCENT PASSING
6 INCH	100
3 INCH	90-100
1/4 INCH	25-90
NO. 40	0-30
NO. 200	0-5
- STRUCTURAL FILL SHALL BE PLACED IN UNIFORM LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS AND SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY PER ASTM D-1557, MODIFIED PROCTOR TEST.
- DO NOT BACKFILL FOUNDATION WALLS UNLESS WALLS ARE ADEQUATELY BRACED TO PREVENT MOVEMENT OR STRUCTURAL DAMAGE.
- PROVIDE FOUNDATION DRAINAGE SYSTEM WITH GRAVITY FLOW TO PROPERLY DESIGNED AND APPROVED OUTLET. REFER TO ARCHITECTURAL AND SITE DRAWINGS FOR ADDITIONAL INFORMATION.
- SLOPE EXCAVATIONS AS REQUIRED FOR STABILITY AND SAFETY IN ACCORDANCE WITH OSHA REQUIREMENTS. PROVIDE SHEETING OR SHORING IN ACCORDANCE WITH OSHA GUIDELINES.

CONCRETE NOTES

- CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318 - LATEST)," AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301-LATEST)." THESE PUBLICATIONS ARE AVAILABLE THROUGH THE AMERICAN CONCRETE INSTITUTE (248) 848-3800.
- CONCRETE SHALL BE PROPORTIONED, MIXED, AND PLACED IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN ACI 318-LATEST.
- CONCRETE MIX DESIGN:
 - FOOTINGS, PIERS, AND FOUNDATION WALLS:
 - A. STRENGTH: 3000 PSI @28 DAYS
 - B. AGGREGATE: 3/4"
 - C. W/C RATIO: 0.55 MAX
 - D. ENTRAINED AIR: 5% TO 7%
 - E. SLUMP: 4" MAX
 - EXTERIOR SLABS ON GRADE
 - A. STRENGTH: 4000 PSI @28 DAYS
 - B. AGGREGATE: 3/4"
 - C. W/C RATIO: 0.45 MAX
 - D. ENTRAINED AIR: 5% TO 7%
 - E. SLUMP: 4" MAX
 - INTERIOR SLABS ON GRADE:
 - A. STRENGTH: 3000 PSI @28 DAYS
 - B. AGGREGATE: 3/4"
 - C. W/C RATIO: 0.55 MAX
 - D. ENTRAPPED AIR ONLY (NO ENTRAINMENT)
 - E. SLUMP: 4" MAX

- NOTE:**
- ADD AIR ENTRAINING ADMIXTURE AT MANUFACTURER'S PRESCRIBED RATE TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING THE ABOVE NOTED AIR CONTENT.
 - ADDITIONAL SLUMP MAY BE ACHIEVED BY THE ADDITION OF A MIDRANGE OR HIGH RANGE WATER REDUCING ADMIXTURE. MAXIMUM SLUMP AFTER ADDITION OF ADMIXTURE SHALL BE 6 INCHES AND 8 INCHES RESPECTIVELY.
- CONCRETE MIXING:
- JOB-SITE MIXING OF CONCRETE WILL NOT BE PERMITTED.
 - READY-MIX CONCRETE MUST COMPLY WITH THE REQUIREMENTS OF ASTM C94, AND AS SPECIFIED. PROVIDE BATCH TICKET FOR EACH BATCH DISCHARGED AND USED IN WORK, INDICATING PROJECT NAME, MIX TYPE, MIX TIME, BATCH QUANTITY, AND PROPORTIONS OF INGREDIENTS.
- CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
 - PROVIDE PVC SLEEVES WHERE PIPES PASS THROUGH EXTERIOR CONCRETE OR SLABS CAST ON GRADE. ADJACENT SLEEVES SHALL BE SPACED A MINIMUM OF THREE DIAMETERS APART. OPTION: CORED HOLES. NO PENETRATIONS SHALL BE MADE THROUGH PIERS OR ISOLATED COLUMN OR PIER FOOTINGS.
 - REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, LATEST EDITION.
 - WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND SHALL BE PROVIDED IN FLAT SHEETS. LAP TWO SQUARES AT ALL JOINTS AND TIE AT 3'-0" ON CENTER.
 - FIBER REINFORCEMENT SHALL BE TYPE III SYNTHETIC VIRGIN HOMOPOLYMERACEM POLYPROPYLENE FIBERS CONFORMING TO ASTM C1116.
 - REINFORCING STEEL SHOP DRAWINGS BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. PROVIDE AND SCHEDULE ON THE SHOP DRAWINGS ALL NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION.
 - MINIMUM CONCRETE COVER TO REINFORCEMENT AS FOLLOWS:
 - A) CONCRETE CAST AGAINST SOIL = 3 INCHES
 - B) FORMED CONCRETE IN CONTACT WITH SOIL OR EXPOSED TO WEATHER
 - #5 BARS AND SMALLER = 1 1/2 INCHES
 - #6 BARS AND LARGER = 2 INCHES
 - C) SURFACES NOT IN CONTACT WITH SOIL OR EXPOSED TO WEATHER = 1 INCH
 - REINFORCEMENT SHALL BE CONTINUOUS AROUND CORNERS AND AT INTERSECTIONS. PROVIDE LAPPED BARS AT SPLICES AND HOOKED BARS AT DISCONTINUOUS ENDS. SEE SCHEDULE FOR MINIMUM REBAR LAP SPLICE LENGTHS.
 - WELDING OF REINFORCEMENT IS NOT PERMITTED.
 - CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS. VERTICAL CONSTRUCTION JOINTS SHALL BE MADE 4 FEET MINIMUM FROM A WALL CORNER OR INTERSECTION AS SHOWN ON DETAIL.
 - PROVIDE ANCHOR RODS OR ANCHOR BOLTS CONFORMING TO ASTM A307, A36 OR F1554 WITH NUT AND WASHER ALL HOT DIP GALVANIZED FOR P.T. WOOD SILL PLATES.

DESIGN LOADS

- BUILDING CODE: MAINE UNIFORM BUILDING AND ENERGY CODE INTERNATIONAL BUILDING CODE, 2009 EDITION INTERNATIONAL EXISTING BUILDING CODE, 2009 EDITION ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- DESIGN FLOOR LIVE LOADS:

DWELLING UNITS:	40PSF
STAIRS:	40 PSF
- DESIGN ROOF SNOW LOAD:

GROUND SNOW LOAD (Pg):	60 PSF
SNOW EXPOSURE FACTOR (Ce):	1.0
SNOW LOAD IMPORTANCE FACTOR (Is):	1.0
SNOW LOAD THERMAL FACTOR (Ct):	1.1
FLAT ROOF SNOW LOAD (Pf):	46 PSF + DRIFT
- DESIGN WIND LOAD:

BASIC WIND SPEED:	100 MPH
WIND LOAD IMPORTANCE FACTOR (Iw):	1.0
WIND EXPOSURE:	B
INTERNAL PRESSURE COEFFICIENT:	±0.18
COMPONENTS & CLADDING LOADS PER ASCE:	7-05
- DESIGN SEISMIC LOADS: RESIDENTIAL STRUCTURE

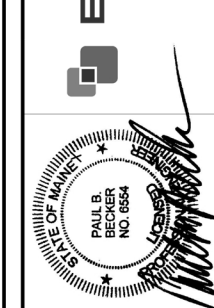
STRUCTURAL STEEL NOTES

- STRUCTURAL STEEL, FABRICATION, AND ERECTION SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN FABRICATION, AND ERECTION OF STRUCTURAL STEEL" 9TH EDITION, AND THE "CODE OF STANDARD PRACTICE, LATEST EDITION.
- STRUCTURAL STEEL: PLATES, SHAPES, AND BARS, SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE (U.N.O.). WIDE FLANGE STRUCTURAL STEEL SHAPES (W SECTIONS): ASTM A992 (Fy = 50 KSI) WITH SPECIAL REQUIREMENTS PER AISC TECHNICAL BULLETIN #3 DATED MARCH, 1997.
- STRUCTURAL TUBING: CONFORM TO ASTM A500 GRADE B, Fy = 46 KSI.
- STRUCTURAL STEEL BOLTS: ASTM A325.
- ALL WELDING SHALL CONFORM TO AWS D1.1- LATEST EDITION. ELECTRODES SHALL CONFORM TO AWS A5.1 E70XX SERIES WITH PROPER ROD TO PRODUCE OPTIMUM WELD (LOW HYDROGEN).
- ALL STRUCTURAL STEEL SHALL BE PRIMED AFTER FABRICATION.
- PROVIDE HILTI HAS-E OR H.D. GALV A36 THREADED ROD ANCHORS WITH HILTI HY200 OR HY70 ADHESIVE EPOXY AS NOTED ON DRAWINGS AS A SYSTEM INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- SUBMIT SHOP DRAWINGS FOR REVIEW.

WOOD FRAMING NOTES:

- 2x8, 2x10, & 2x12 LUMBER: NO 2 GRADE OR BETTER. 2x6 & 2x4 LUMBER: STUD GRADE OR BETTER. SPRUCE-PINE-FIR SOUTH (SPFs) OR SPRUCE-PINE-FIR (SPF) KILN DRIED TO 19 PERCENT MAXIMUM MOISTURE CONTENT.
- STRUCTURAL COMPOSITE LUMBER (LVL AND PSL) SHALL BE BOISE VERSA-LAM OR TRUS-JOIST MICROLAM OR PARALLAM. REFER TO MANUFACTURERS LITERATURE FOR PROPER HANDLING AND INSTALLATION GUIDELINES.
 - POSTS: 1.7E, 2400 Fb (MIN)-SOLID, NOT BUILT UP
 - BEAMS: 1.9E, 2600 Fb (MIN)
- O.S.B. & PLYWOOD SHALL BE APA PERFORMANCE RATED. PLYWOOD & O.S.B. SHALL BE NAILED TO ALL FRAMING AND BLOCKING AS FOLLOWS:
 - 8d (0.113" MIN) GALV NAILS AT 4" O.C. AT PANEL EDGES AND 8" O.C. WITHIN PANELS.
 - FLOORS: 3/4" NOM. (MIN) TONGUE & GROOVE. GLUED TO ALL FRAMING AND USE RING SHANK NAILS.
 - ROOFS: 5/8" NOM. (MIN)-TONGUE & GROOVE OR H-CLIPS AT 24" O.C. RAFTERS.
 - WALLS: 1/2" NOM. (MIN)
- PERIMETERS OF WALLS AND OPENINGS NAILED AT SAME SPACING AS SPECIFIED FOR PLYWOOD & O.S.B. EDGES
- ALL BUILT-UP BEAMS AND POSTS SHALL BE NAILED AS FOLLOWS:
 - BEAMS: (3) ROWS 12d (0.128" MIN) NAILS @ 12" O.C. IN EA PIECE
 - POSTS: (2) ROWS 12d NAILS @ 8" O.C. IN EA PIECE
- FASTENING NOT SPECIFIED SHALL CONFORM WITH IBC TABLE 2304.9.1
- WOOD CONNECTION HARDWARE (JOIST HANGERS, STRAPS, ETC) SHALL BE AS INDICATED ON THE DRAWINGS AND MANUFACTURED BY SIMPSON STRONG-TIE OR APPROVED SUBSTITUTE. ALL CONNECTION HARDWARE SHALL BE GALVANIZED G-90 EXCEPT CONNECTION HARDWARE USED IN CONJUNCTION WITH PRESERVATIVE TREATMENT SHALL MEET THE FOLLOWING:
 - ZMAX GALVANIZED MEETING G185 HDG PER ASTM A653 AND ASTM 153 FASTENERS. FASTENERS SHALL MATCH MATERIAL/COATING OF CONNECTION HARDWARE, UNLESS NOTED BY MANUF SPECIFICATIONS. REFER TO MANUFACTURERS LITERATURE FOR PROPER HANDLING AND INSTALLATION GUIDELINES.
- I-JOIST FRAMING INCLUDING 1" THICK (MIN) RIM BOARD. INSTALL ACCORDING TO MANUFACTURERS DETAILS.
- PROVIDE WEB STIFFENERS, SQUASH BLOCKS, BACKER BLOCKS, BLOCKING, AND NAILING AS SPECIFIED BY I-JOIST MANUFACTURER.
- PROVIDE VERTICAL 2x4 OR 2x6 STUD BLOCKS AT BOX SILLS UNDER POSTS.
- PRESERVATIVE TREATED LUMBER (P.T.): NO.2 GRADE OR BETTER SOUTHERN PINE (SP OR SYP) TREATED W/ ACQ NON-AMMONIA PROCESS TO 0.25 PCF (MIN.) RETENTION.
- ALL FRAMING & SHEATHING NAILS TO BE HOT DIPPED GALVANIZED.
- HOT DIP GALVANIZED NAILS, BOLTS, LAG SCREWS, AND FASTENERS AT EXTERIOR AND IN P.T. LUMBER CONSTRUCTION.

BECKER
STRUCTURAL ENGINEERS
75 Work Street, Portland, Maine 04101
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Approved	
Issued For	
Date	04/28/16
Rev No	

ISSUED FOR PERMIT ONLY

35 PLEASANT STREET
 RENOVATION & ADDITION
 GENERAL NOTES & TYPICAL DETAILS

Designed	DB	Scale	NOTED
Drawn	APP	Date	04/28/16
Checked	PBB	Becker Job Number	3620.01

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